

Urgent action, innovation needed for infrastructure recovery in SA

According to SRK Consulting partner and principal engineering technologist Steve Bartels, speed and ingenuity are now of the essence as South Africa's hopes of a economic recovery rely heavily on greater infrastructure investment.

“Government’s establishment of Infrastructure South Africa to streamline project roll-out, and the recent prioritisation of strategic integrated projects, is a promising step,” said Bartels. “But all this work needs a strong and capable construction sector – and years of decline are now being aggravated by the local impact of the pandemic.”

He said the role of infrastructure investment in stimulating economic growth should not be underestimated, citing the creation of 8 million jobs by President Franklin D. Roosevelt’s Works Progress Administration in the US after the Great Depression. He also pointed to the similar vision of another great US president, John F. Kennedy, who once said: "It is not wealth that built our roads, but roads that built our wealth."



Transforming lives and communities

Bartels said: “If South Africa implemented a similar programme and managed it correctly, it could potentially be the key to the recovery of South Africa’s economic fortunes.” His involvement in poverty alleviation projects and labour-based projects for provincial government has given him first-hand experience of how this type of employment can transform lives and communities.

“I witnessed how local contractors and workers were lifted out of poverty by infrastructure projects in KwaZulu-Natal – and no longer relied on handouts to feed their children,” he said. “A little done wisely goes a long way.”

He said the construction sector had been under significant pressure in recent years as government spending on infrastructure declined, with a number of large contractors closing doors or entering business rescue. During 2020, restrictions related to Covid-19 were expected to cause an 8.7% decline in the construction sector this year, and the loss of up to 100,000 jobs. This situation needed to be turned around as a matter of urgency to preserve the capability of the sector, he said.

While having to redirect funds to address Covid-19 impacts, government still plans to commit R100bn to its National Infrastructure Fund over the next decade – to help prepare and package projects and provide catalytic finance.



Utilising SA's scientific and engineering expertise

“South Africa’s future demands that we make full use of our scientific and engineering expertise to focus our development efforts and achieve more with the fewer resources at our disposal,” he said. “The Covid-19 pandemic has reminded us that science-based decision-making is the only way out of the various crises we currently face.”

He highlighted that consulting engineers and scientists are important sources of the skills and experience required to build infrastructure and re-ignite the economy. Vis Reddy, MD of SRK Consulting, warned that the plight of the construction sector during 2020 had seen many consulting engineering firms having to reduce pay or even shed jobs.

“This sector could risk losing essential talent and experience, which could seriously undermine South Africa’s recovery efforts in the infrastructure space,” said Reddy. “The danger is that large-scale job shedding invariably means that many qualified and experienced professionals are forced to take up other careers – so we often can’t get them back after a prolonged downturn.”

He emphasised that the skills and experience of consulting engineers were a crucial foundation for recovery and needed to be well-deployed and nurtured.

Leveraging technology

Bartels also highlighted the importance of leveraging technology in the infrastructure sector to enable a recovery to proceed even under pandemic conditions. He noted that communication and data-sharing technologies will be increasingly important tools in the 'new normal' working practices and social distancing.

"While most of these technologies were available before – such as virtual private networks to facilitate the sharing of documents and information – not everyone was using them effectively," he said. "Now they will become vital for continued efficiency."

He said that infrastructure development would also benefit from innovative new ways of gathering detailed visual and other data, which were traditionally gathered by physically visiting and investigating project sites.

"High-definition photography and photogrammetry, as well as the technologies such as drones and remote sensing to deploy these tools, will become more valuable," said Bartels. "GIS and GPS technology will continue to grow in their applications, helping to accurately geo-locate data points for various scientific and engineering applications."

The adversity of the Covid-19 pandemic had also been accompanied by opportunity, he said, where more use was being made of younger scientists and engineers within SRK Consulting.

"Many of our most experienced staff are vulnerable to Covid-19 due to their age, so we have made more use of younger staff where projects require travel and on-site time," he said. "These young, well-qualified and resourceful professionals have already proved to be valuable assets in their new roles – and are now accelerating their contribution and their learning curve."

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